

## Picture Tube

NO ION-TRAP MAGNET REQUIRED  
LOW-VOLTAGE ELECTROSTATIC FOCUS 110° MAGNETIC DEFLECTION

### ELECTRICAL

#### Direct Interelectrode Capacitances

|                                                          |                        |    |
|----------------------------------------------------------|------------------------|----|
| Cathode to all other electrodes. . . . .                 | 5                      | pF |
| Grid No.1 to all other electrodes. . . . .               | 6                      | pF |
| External conductive coating to anode . . . . .           | { 2500 max<br>1700 min | pF |
| Heater Current at 6.3 V. . . . .                         | 600 ± 30               | mA |
| Heater Warm-up Time (Average). . . . .                   | 11                     | s  |
| Electron Gun . . . . . Type Requiring No Ion-Trap Magnet |                        |    |

### OPTICAL

|                                        |                             |
|----------------------------------------|-----------------------------|
| Phosphor . . . . .                     | P4—Sulfide Type, Aluminized |
| For curves, see front of this section  |                             |
| Faceplate. . . . .                     | Filterglass                 |
| Light transmission (Approx.) . . . . . | 76%                         |

### MECHANICAL

|                                    |                   |
|------------------------------------|-------------------|
| Weight (Approx.) . . . . .         | 25 lb             |
| Overall Length . . . . .           | 14.875 ± 0.281 in |
| Neck Length. . . . .               | 5.125 ± 0.125 in  |
| Projected Area of Screen . . . . . | 282 sq in         |
| External Conductive Coating        |                   |

Type . . . . . Regular-Band  
Contact area for grounding . . . . . Near Reference Line

#### For Additional Information on Coatings and Dimensions

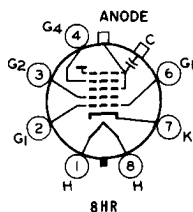
See *Picture-Tube Dimensional-Outlines* and *Bulb J187 E* sheets at front of this section

Cap. . . . . Recessed Small Cavity (JEDEC No. J1-21)

Base . . . . . Small-Button Neoeightar 7-Pin, Arrangement 1 (JEDEC No. B7-208)

### TERMINAL DIAGRAM (Bottom View)

- Pin 1—Heater
- Pin 2—Grid No.1
- Pin 3—Grid No.2
- Pin 4—Grid No.4
- Pin 6—Grid No.1
- Pin 7—Cathode
- Pin 8—Heater
- Cap—Anode (Grid No.3, Grid No.5, Screen, Collector)
- C—External Conductive Coating



# 23ARP4

## MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

*Unless otherwise specified, voltage values  
are positive with respect to cathode*

|                                          |                          |        |
|------------------------------------------|--------------------------|--------|
| Anode Voltage. . . . .                   | { 22000 max<br>12000 min | V<br>V |
| <b>Grid-No.4 (Focusing) Voltage</b>      |                          |        |
| Positive value . . . . .                 | 1100 max                 | V      |
| Negative value . . . . .                 | 550 max                  | V      |
| Grid-No.2 Voltage. . . . .               | { 550 max<br>200 min     | V<br>V |
| <b>Grid-No.1 Voltage</b>                 |                          |        |
| Negative peak value. . . . .             | 220 max                  | V      |
| Negative bias value. . . . .             | 155 max                  | V      |
| Positive bias value. . . . .             | 0 max                    | V      |
| Positive peak value. . . . .             | 2 max                    | V      |
| Heater Voltage . . . . .                 | { 6.9 max<br>5.7 min     | V<br>V |
| <b>Peak Heater-Cathode Voltage</b>       |                          |        |
| Heater negative with respect to cathode: |                          |        |
| During equipment warm-up period not      |                          |        |
| exceeding 15 seconds. . . . .            |                          |        |
|                                          | 450 max                  | V      |
| After equipment warm-up period . . . . . | 200 max                  | V      |
| Heater positive with respect to cathode: |                          |        |
| Combined AC and DC voltage . . . . .     | 200 max                  | V      |
| DC component . . . . .                   | 100 max                  | V      |

## TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

*Unless otherwise specified, voltage values  
are positive with respect to grid No.1*

|                            |          |   |
|----------------------------|----------|---|
| Anode Voltage. . . . .     | 16000    | V |
| Grid-No.4 Voltage. . . . . | 0 to 400 | V |
| Grid-No.2 Voltage. . . . . | 400      | V |
| Cathode Voltage. . . . .   | 43 to 78 | V |

For visual extinction of focused raster

## MAXIMUM CIRCUIT VALUE

|                                        |         |    |
|----------------------------------------|---------|----|
| Grid-No.1 Circuit Resistance . . . . . | 1.5 max | MΩ |
|----------------------------------------|---------|----|

